

**Proposed Framework for Incorporation of LID Requirements in
Municipal NPDES Permits
for Discussion with LID Advisory Committees
11/16/09**

This is a preliminary description of how LID permit requirements could be structured and implemented. It has been developed to support early discussion and to solicit input from the Advisory Committees

PERMIT FRAMEWORK

To comply with the PCHB ruling, and to protect aquatic resources, Ecology will require use of Low Impact Development stormwater management strategies. In Municipal NPDES Permit updates, Ecology would set performance standards for LID. It will be the responsibility of Municipal jurisdictions and development project proponents to determine what specific steps to take to meet these performance requirements.

In the permit updates, Ecology would set hydrologic performance standards applicable to new development and redevelopment, requiring that municipalities require developers to utilize LID techniques to meet these standards, and eventually requiring municipalities to revise development codes.

- Different hydrologic performance standards would be set for developments of different levels of density; and different standards could be set for redevelopment projects.
- Initial performance standards would be set based on evaluation of the hydrologic performance that can be achieved at each level of density with LID techniques that are known and readily available.
- Longer-term performance standards would be set based on an expectation that over time, development code changes will be made that facilitate reductions in “effective” impervious area and site disturbance and that LID techniques will evolve and become more effective.
- Compliance schedules would be set for municipalities to implement both the initial and longer-term performance standards: An initial set of performance standards would be set for each level of density. The issue of compliance schedules to meet both the initial and longer-term performance standards within the permits is a significant issue for discussion.
- The timing for including both the initial and longer-term performance standards in the permits is a key question for the implementation committee. The PCHB’s phase I ruling implied requiring the implementation of some LID requirements this permit term. However the current LID committee schedule and the approaching expiration of the current permits in February 2012 make a permit modification difficult.

- There are a variety of ways that hydrologic performance standards can be structured...examples are being discussed with the TAC.

Consistent definitions would be used across western Washington for LID techniques, their design guidelines and their expected hydrologic performance (how they are represented in the runoff model). These definitions would be included in the state Stormwater Management Manual.

Given the required performance standards, and consistent definitions for LID techniques, Municipalities would make their own decisions regarding specifically how to pass forward the LID requirements to developers. Ecology assumes there are two primary choices (A and B below) for how Municipalities could structure their programs:

- A. Municipalities would require that each development (or redevelopment) proponent demonstrate that their proposed development will meet the hydrologic performance standard. Developers would perform that demonstration by inputting the characteristics of their development (amount of natural vegetation retained, impervious area, engineered LID techniques, soil type, etc) into an accepted hydrologic model provided by the Municipality – using the consistent, accepted definitions and variables for LID techniques.
 - B. Municipalities would require use of LID techniques to meet municipal LID guidelines with prescriptive requirements (these guidelines could define a hierarchy of required LID techniques and use criteria). To support this approach, the municipality would demonstrate to Ecology, on a programmatic basis, that application of LID to meet the municipal guidelines is expected to meet the Ecology performance standards. This would be done through modeling a set of case studies.
- Municipalities could also allow individual development proponents to choose between an A or B type approach.
 - Ecology would define acceptable “off-ramps” to LID requirements – certain conditions under which municipalities could grant variances or exceptions to LID requirements, such as presence of contaminated soils, high groundwater, steep slopes, etc.

In the municipal stormwater permit, Ecology could require municipalities to implement an administrative process, involving all affected departments, to evaluate development codes, and identify and implement opportunities for code change to facilitate decreases in effective impervious area and disturbed areas at development sites (e.g., reduction of street widths).

Ecology could also require municipalities conduct basin level planning that incorporates low impact development strategies as a water quality management tool to prevent degradation of aquatic resources.

LIKELY PROCESS FOR DEVELOPING PERFORMANCE STANDARDS

This is the process that would be undertaken by Ecology, with Advisory Committee input, prior to permit issuance.

- Initial Performance Standards (the first step on the compliance schedule) would be set based on an evaluation of likely hydrologic performance (reduction in site runoff) that can be achieved at different development densities, with application of currently acceptable LID techniques, utilizing existing development codes. Existing AHBL work is a good starting point.

Modeling based on the assumption that at each level of density, a reasonable number of accepted and applicable LID techniques would be utilized. The performance of these LID techniques would be modeled based on existing design guidance and accepted model inputs.

- Longer-term Performance Standards (the longer-term target on the compliance schedule) would be set based on: 1) evaluation of the likely hydrologic performance (reduction in site runoff) that can be achieved following reasonable development code changes that facilitate reduction in effective impervious area and reduction in the extent of site disturbance; and 2) the application of more sophisticated LID techniques, that take into account better LID performance and evolution of the industry.

KEY ISSUES

1. Should the municipal stormwater NPDES permit require local governments to implement LID in geographic areas that drain to waters not significantly impacted by hydrologic changes caused by development?
2. Should any hydrologic performance standard apply only to developments that exceed the size thresholds for the flow control standard? Should municipalities require smaller developments utilize certain LID techniques without a requirement to demonstrate compliance with a performance standard?